

WHAT IS CLAIMED IS:

1. A communication apparatus which includes IP  
(Internet Protocol) communication means and  
transmits/receives communication data to/from a  
5 destination station discriminated by a telephone  
number, comprising:

IP address obtaining means for obtaining an IP  
address of the destination station from a  
predetermined server based on the telephone number of  
10 the destination station; and

control means for transmitting/receiving the  
communication data on an IP network based on a  
predetermined file transmit/receive protocol to/from  
the destination station by using the obtained IP  
15 address of the destination station.

2. A communication apparatus according to Claim  
1, wherein said predetermined server is an SIP  
(Session Initiation Protocol) proxy server, and said  
20 IP address obtaining means obtains the IP address of  
the destination station from said SIP proxy server  
based on an SIP.

3. A communication apparatus according to Claim  
25 1, further comprising, in addition to said IP  
communication means, analog communication means for  
establishing an analog communication path on a line

switching network or the IP network,

wherein, when it is impossible to  
transmit/receive the communication data on the IP  
network based on said predetermined file

5 transmit/receive protocol," the communication data is  
transmitted/received to/from the destination station  
by using a voice band via said analog communication  
path established by said analog communication means.

10 4. A communication apparatus according to Claim  
1, wherein said IP address obtaining means judges, by  
analyzing the telephone number of the destination  
station, whether or not it is able to perform the  
communication with the destination station via a VoIP  
15 (Voice over Internet Protocol) network, and tries to  
obtain the IP address of the destination station from  
said predetermined server when it is judged to be  
able to perform the communication via the VoIP  
network, and said control means controls to  
20 transmit/receive the communication data to/from the  
destination station on the IP network based on the  
predetermined file transmit/receive protocol by using  
the obtained IP address of the destination station.

25 5. A communication apparatus according to Claim  
3, wherein said IP communication means and said  
analog communication means are composed by using ADSL

(Asymmetric Digital Subscriber Line) gateway(s) which use bands obtained by frequency dividing an ADSL line by a splitter respectively for digital communication and analog communication, respectively.

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6. A communication apparatus according to Claim 1, wherein said control means obtains the IP address of the destination station from the predetermined server based on the telephone number of the  
10 destination station by using a predetermined UDP (User Datagram Protocol), and controls to transmit/receive the communication data to/from the destination station by using the obtained IP address of the destination station based on a predetermined  
15 TCP (Transmission Control Protocol).

7. A control method of a communication apparatus which includes an IP communication means and transmits/receives communication data to/from a  
20 destination station discriminated by a telephone number, comprising the steps of:

obtaining an IP address of the destination station from a predetermined server based on the telephone number of the destination station; and  
25 transmitting/receiving the communication data on an IP network based on a predetermined file transmit/receive protocol to/from the destination

station by using the obtained IP address of the destination station.

8. A control method according to Claim 7,  
5 wherein the predetermined server is an SIP proxy server, and the IP address of the destination station is obtained from the SIP proxy server based on an SIP.

9. A control method according to Claim 7,  
10 wherein, when it is impossible to transmit/receive the communication data on the IP network based on the predetermined file transmit/receive protocol, the communication data is transmitted/received to/from the destination station by using a voice band via an  
15 analog communication path established on a line switching network or the IP network.

10. A control method according to Claim 7,  
wherein the telephone number of the destination  
20 station is analyzed to judge whether or not it is able to perform the communication with the destination station via a VoIP network, it is tried to obtain the IP address of the destination station from the predetermined server when it is judged to be  
25 able to perform the communication via the VoIP network, and the communication data is transmitted/received to/from the destination station

on the IP network based on the predetermined file transmit/receive protocol by using the obtained IP address of the destination station.

5           11. A control method according to Claim 9,  
wherein the transmission/reception of the  
communication data on the IP network and the  
transmission/reception of the communication data on  
the analog communication path are performed by using  
10 ADSL gateway(s) which use bands obtained by frequency  
dividing an ADSL line by a splitter respectively for  
digital communication and analog communication,  
respectively.

15           12. A control method according to Claim 7,  
wherein the IP address of the destination station is  
obtained from the predetermined server based on the  
telephone number of the destination station by using  
a predetermined UDP, and the communication data is  
20 transmitted/received to/from the destination station  
by using the obtained IP address of the destination  
station based on a predetermined TCP.

25           13. A control program for a communication  
apparatus which includes an IP communication means  
and transmits/receives communication data to/from a  
destination station discriminated by a telephone

number, said program comprising the control steps of:

obtaining an IP address of the destination station from a predetermined server based on the telephone number of the destination station; and

5 transmitting/receiving the communication data on an IP network based on a predetermined file transmit/receive protocol to/from the destination station by using the obtained IP address of the destination station.

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14. A control program according to Claim 13, wherein the predetermined server is an SIP proxy server, said program comprising the control step of obtaining the IP address of the destination station  
15 from the SIP proxy server based on an SIP.

15. A control program according to Claim 13, further comprising the control step of, when it is impossible to transmit/receive the communication data  
20 on the IP network based on the predetermined file transmit/receive protocol, transmitting/receiving the communication data to/from the destination station by using a voice band via an analog communication path established on a line switching network or the IP  
25 network.

16. A control program according to Claim 13,

further comprising the control steps of analyzing the telephone number of the destination station to judge whether or not it is able to perform the communication with the destination station via a VoIP network, trying to obtain the IP address of the destination station from the predetermined server when it is judged to be able to perform the communication via the VoIP network, and transmitting/receiving the communication data to/from the destination station on the IP network based on the predetermined file transmit/receive protocol by using the obtained IP address of the destination station.

15           17. A control program according to Claim 15, further comprising the control step of performing the transmission/reception of the communication data on the IP network and the transmission/reception of the communication data on the analog communication path  
20 by using ADSL gateway(s) which use bands obtained by frequency dividing an ADSL line by a splitter respectively for digital communication and analog communication, respectively.

25           18. A control program according to Claim 13, further comprising the control steps of obtaining the IP address of the destination station from the

predetermined server based on the telephone number of the destination station by using a predetermined UDP, and transmitting/receiving the communication data to/from the destination station by using the obtained  
5 IP address of the destination station based on a predetermined TCP.

19. A communication method which sends/receives communication data in IP (Internet Protocol)  
10 communication between communication apparatuses discriminated by telephone numbers, wherein

a first communication apparatus obtains an IP address of a second communication apparatus from a predetermined server based on the telephone number of  
15 the second communication apparatus, and sends a data communication request to the second communication apparatus based on the obtained IP address, and

the communication apparatus on a data receiving side of the first and second communication  
20 apparatuses sends a data sending request to the communication apparatus on a data sending side based on a data send/receive protocol conforming to an HTTP (HyperText Transport Protocol), and sends/receives the communication data on an IP network based on the  
25 data send/receive protocol.

20. A communication method according to Claim



19, wherein the predetermined server is an SIP  
(Session Initiation Protocol) proxy server, and the  
first communication apparatus obtains the IP address  
of the second communication apparatus from the SIP  
5 proxy server based on an SIP.

21. A communication method according to Claim  
19, wherein the communication apparatus on the data  
receiving side of the first and second communication  
10 apparatuses has a WWW (World Wide Web) communication  
function for performing processes such as browsing, a  
jump to another link, recording output, transfer and  
the like in respect to data of a WWW server using the  
data send/receive protocol conforming to the HTTP,  
15 and receives the communication data from the  
communication apparatus on the data sending side by  
using the WWW communication function.

22. A communication method according to Claim  
20 21, wherein the communication apparatus on the data  
receiving side of the first and second communication  
apparatuses performs the processes such as the  
browsing, the jump to another link, the recording  
output, the transfer and the like in respect to the  
25 communication data received from the communication  
apparatus on the data sending side by using the WWW  
communication function.

23. A communication apparatus wherein said communication apparatus operates as the first or second communication apparatus described in any one of Claims 19 to 22.

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24. A communication apparatus wherein said communication apparatus operates as the communication apparatus on the data sending side or the communication apparatus on the data receiving side  
10 described in any one of Claims 19 to 22.

25. A control program for a communication apparatus which controls the operation of the first or second communication apparatus described in any  
15 one of Claims 19 to 22.

26. A control program for a communication apparatus which controls the operation of the communication apparatus on the data sending side or  
20 the communication apparatus on the data receiving side described in any one of Claims 19 to 22.